Air Resources Board

Lake Tahoe Atmospheric Deposition Study (LTADS)

User's Manual v.1.0

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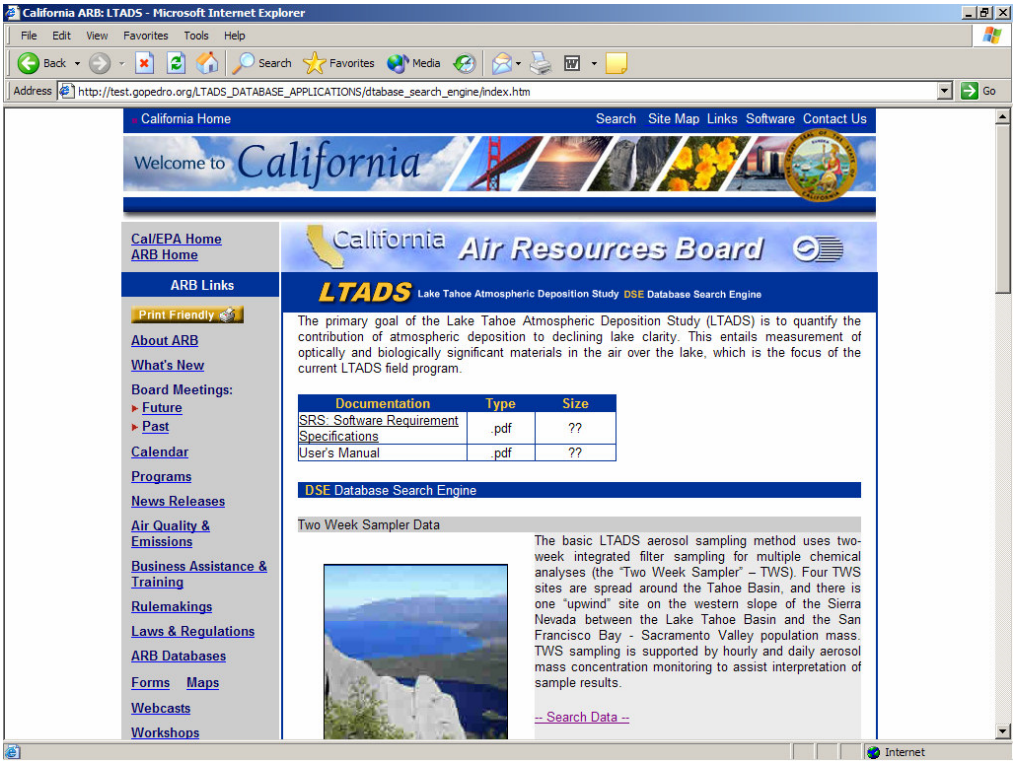
1. The Main Page



The above screen shot is the main web page of the LTADS database server. The page has three main options:

- **View Documentation** – This option allows the user to view various information about the database system, including the Software Requirement Specification (SRS), and the User's Manual

- **Search Database** – The next several options allow the user to search many different types of data that are stored on the database server.

- **Administrative Login** – Permits an administrator of the system to access a restricted area of the site where modifications can be made to the database system.

2. View Documentation

Viewing the documentation for the LTADS database system is very easy. Several links at the top of the main page have been provided to allow the clients to quickly access any and all information regarding the usage and creation of the system.

2.1 View SRS

To view the Software Requirement Specification, click on the first available link under the Documentation heading. This links to a .pdf file which contains information about the design requirements for the system.

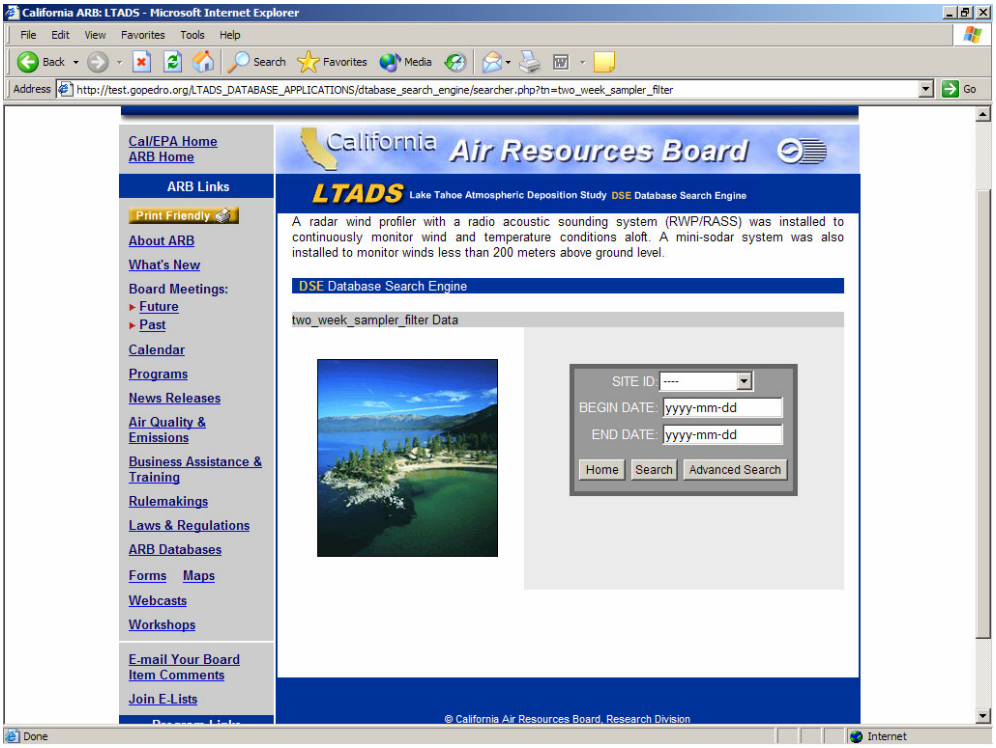
2.2 View User's Manual

To view the User's Manual, click on the second available link under the Documentation heading. This will like the user to a .pdf file which contains information about how to use the system and all its features.

After the necessary information has been entered, the student can click on the submit button. If the user name has not been registered before, LTADS DATABASE SERVER will create a record for the new student and take them to the main page. If the student has already been registered, the system will take them back to the Registration page.

3. Search Database

The main purpose of the LTADS Database system is to allow anybody to access the information gathered in the study. This can be done quickly and effectively using the search features described below.



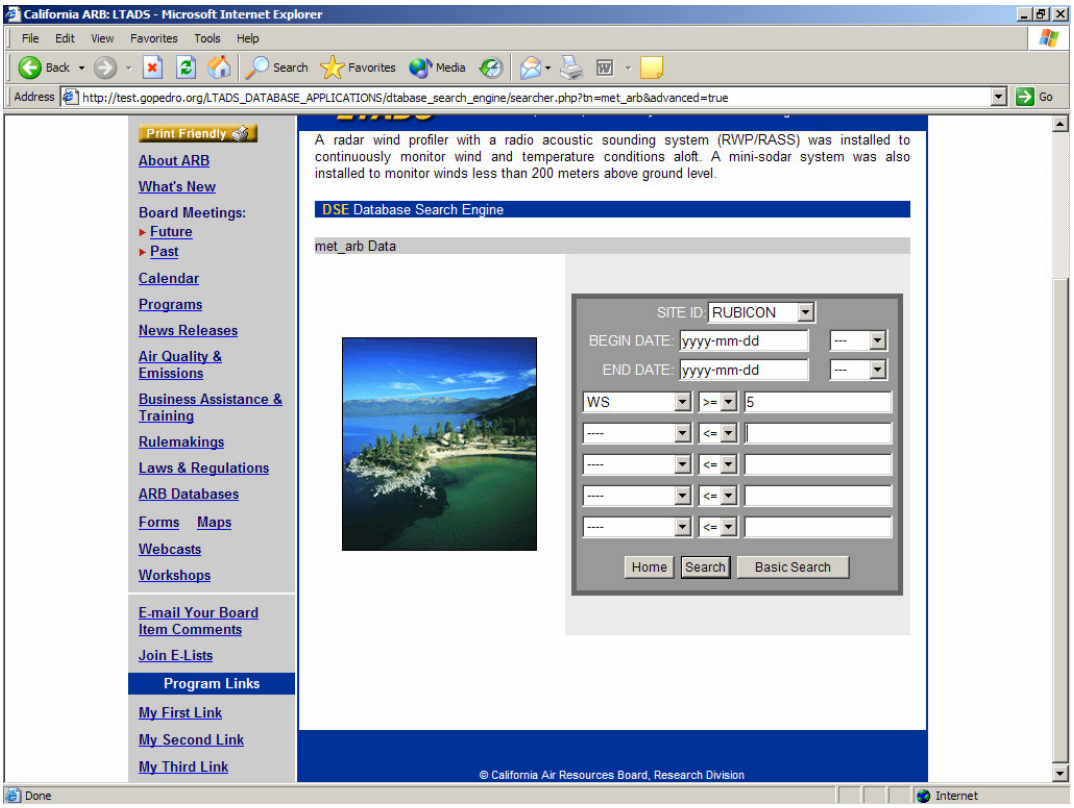
To begin, start by clinking – Search Data – from one of the six available data types, which should be labeled as follows:

- Two Week Sampler
- Two Week Sampler Filter
- MET Data
- Minival Data
- Minival Soil Data
- BAM Data

After clicking on the search option, you will be directed to the basic search criteria page. This screen will permit the user to retrieve data records, given the Site Name, Range of

Dates, and/or Time of day (if applicable).

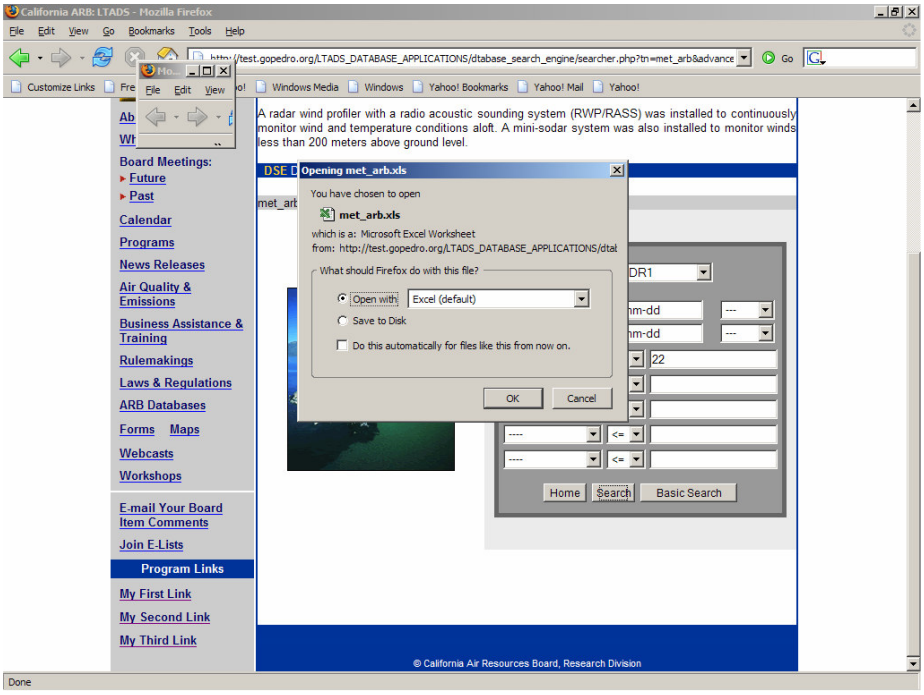
By clicking on the "Advanced Search" button, an additional set of fields will appear below the basic search criteria, which will allow the user to enhance their search.



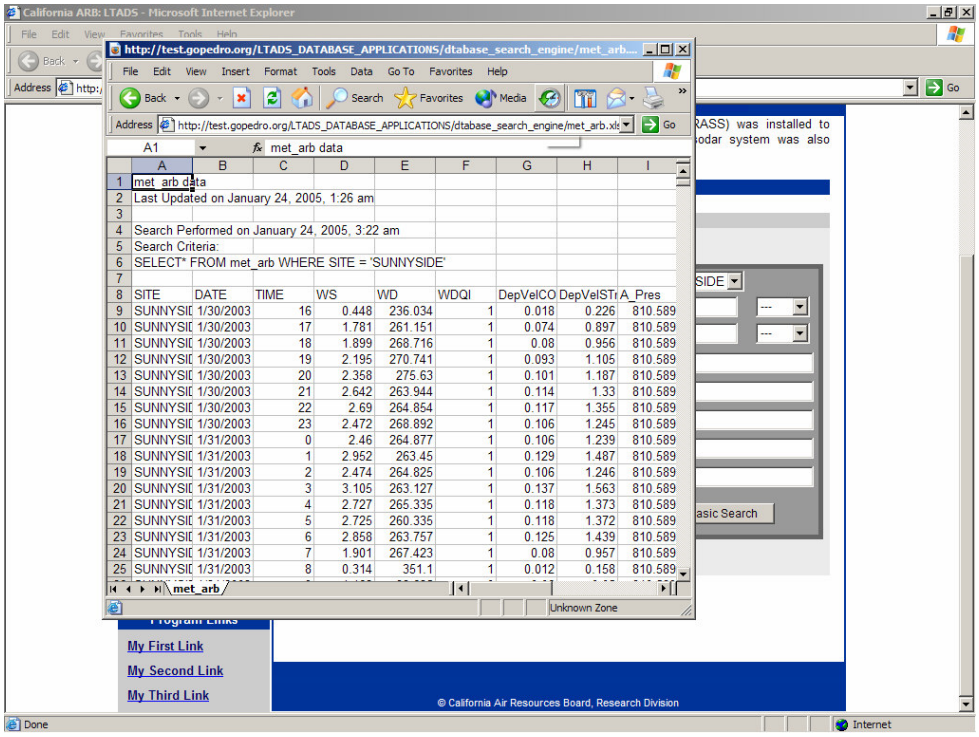
The advanced search allows the user to narrow their search criteria. This can be achieved through the five additional dropdown menus which permit the user to select from the different types from the data set and compare the value from the data set with values that they can enter in the fields on the right.

Clicking "Basic Search" will remove the five advanced search fields.

After the user selects the search criteria, they should press the "Search" button. After pressing the button, the Database Server will search for all relevant information, and will produce a tab-delimited text-file, which can be displayed or saved on the User's computer depending on their preference.



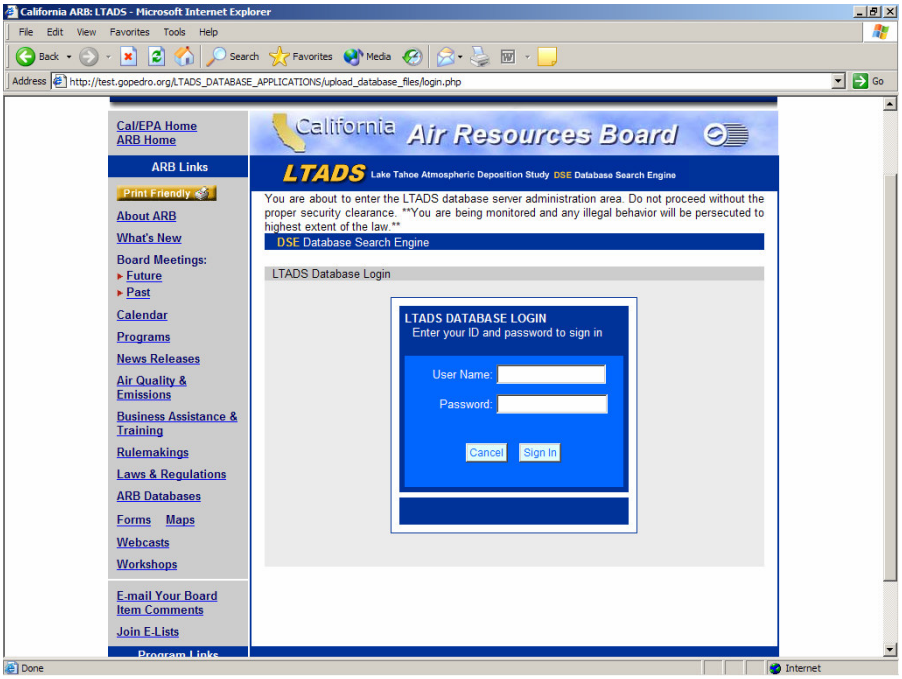
Note: When given the option of opening the file produced by the LTADS Database Server, it is recommended that the user open it using Microsoft Excel 97 or later.



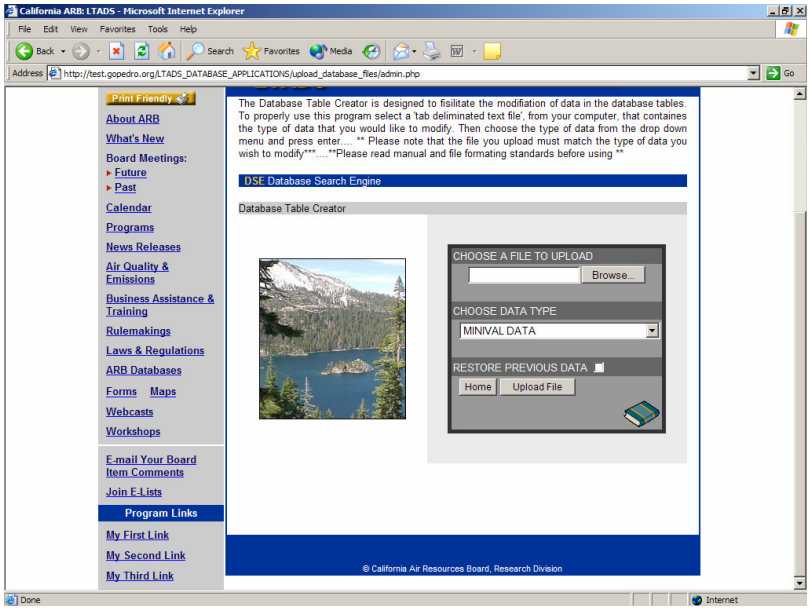
This is an example of the data prepared by the LTADS Database Server. At this point, the user can manipulate the data with all of the functionality inherent of the application which they use to open it.

4. Administrative Login

From the main page, the Administrative User can access the protected portion of the site by clicking on “Database Administrative Login” at the bottom.



In order to access the protected areas, the administrator must first enter a username and the administrative password. If a correct username and password is entered, they will be redirected to the administrative area, otherwise, the user will be directed back to the main page.

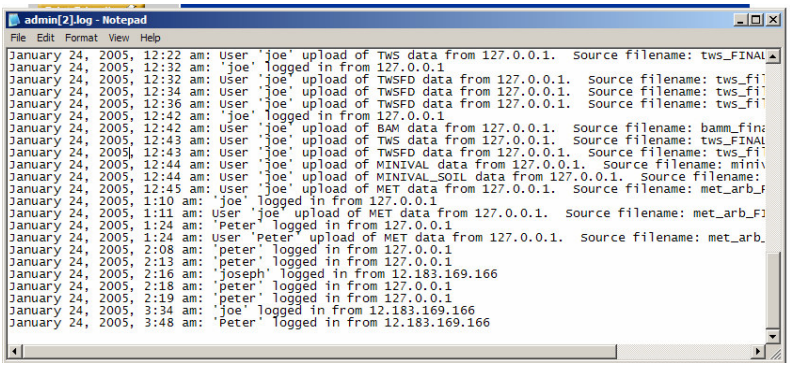


The administrative area grants the following privileges:

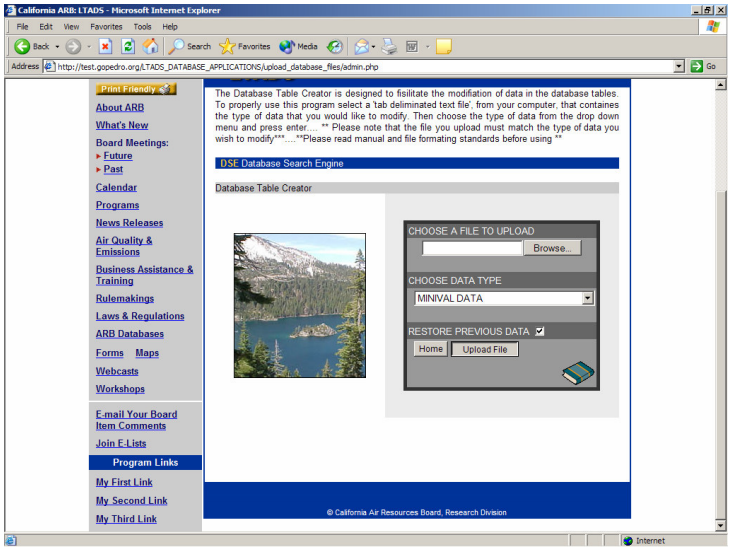
- **View Logfile**
- **Restore Database Table**
- **Create/Update Database Table**

In order to view the logfile, the Administrator needs to click on the book icon in the lower-right hand corner.

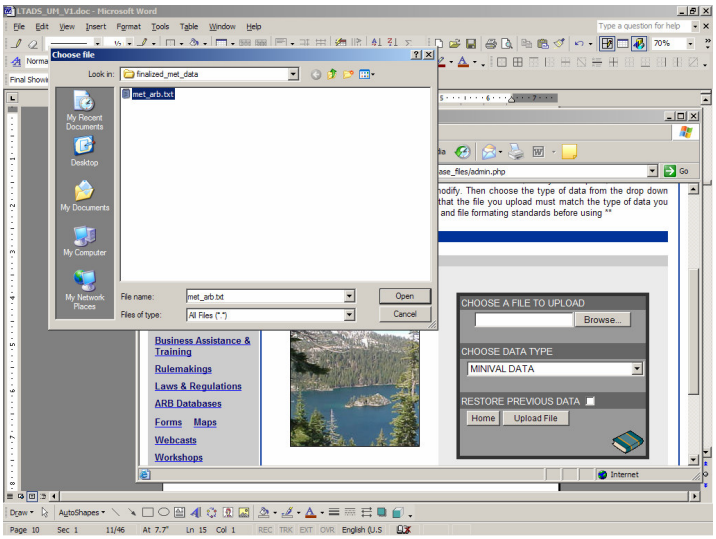
After clicking on the log icon, a window will be opened with the log information. The logfile contains information such as the date, time, username, IP address, data file, data type, and the most recent upload action



In order to restore a database table, a checkbox labeled “Restore Previous Data” has been provided to the administrative user. After clicking this checkbox, and selecting the appropriate data type from the “Choose Data Type” drop down menu, the administrator can restore the database table to a previous state by clicking on the “Upload File” button near the bottom of the window.



Finally, in the event that the administrator wishes to update the data, the “Choose a File to Upload” section which provides a “Browse…” option. This allows the Administrator to search for the appropriate file which they wish to use for the creation/update of the given data table.



Once the Administrator has chosen the file, and selected the appropriate data type from the drop-down menu, they can press "Upload File" to update/create the database table.

Note that some special precautions must be taken on the file uploaded to the LTADS Database Server.

- All uploaded files must be in tab-delimited format. This can be done easily with Excel with the Save As… feature in the File Menu.
- The first row in all uploaded data MUST contain the header fields. These header fields may not contain any special characters (such as /, (,), ', ', #, $, `, or any spaces, etc…)
- In order to accurately sense the *type* of data, valid data must be present in all fields for the first 4 records.
- For full search functionality, it is recommended that one or more fields have the word "Date" in the title. For added functionality, it is recommended that one field contain the word "Time" or "Hour".
- "Date" Fields **must** be of one of the following formats: YYYYMMDD, YYYY-(D)D-(M)M, YYYY/(D)D/(M)M, (M)M-(D)D-YYYY, (M)M/(D)D/YYYY.
- "Time" Fields may be stored as: (H)H:00 or (H)H. Hours are stored in military time.
- Quotation Marks may **not** appear anywhere in the input data file.

5. LTADS Server Setup

One of the key features of the LTADS database system is its portability. There are three main components required for the LTADS database: Apache Webserver, PHP 4.2 or later, and mySQL Database Server.

The first thing that needs to be done is to copy the directory that contains the LTADS Database Server to the directory on the webserver that posts the information to the network.

Once the files have been copied, to the webserver, a database needs to be created on the mySQL database server. The name of the database **must** be "ltads_database". This can be done with the following mySQL Query:

```
CREATE DATABASE ltads_database;
```

Next, there are two files that need to be modified: php.ini and database_connection.php. database_connection.php is located at:
[LTADS_ROOT_FOLDER]/database_connection/database_connection.php

php.ini must have the following properties modified:

```
max_execution_time = 100000
upload_max_filesize = 10M
session.use_cookies = 1
```

database_connection.php must be modified in the following manner:

```
$host = 'localhost'; // location of database server (if database server and web server are on the same machine then leave as localhost)

$db_name = 'ltads_database';  // Name of Database Server

$user = 'admin';     // Username to access the database

$pass = 'mypass';       // Password to access the database
```

** $host should be changed to the address of the mySQL database server. If the webserver and the database server are on the same machine, keep it as 'localhost'

** $db_name should be the name of the database.

** $user should be the name of the username with access to create and view tables

** $pass should be the password for $user